

Product Information

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Ultramid® B3WM8 BK00102 **Polyamide 6**


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Product Description

Ultramid B3WM8 BK00102 is a heat stabilized, pigmented black, 40% mineral reinforced PA6 injection molding resin. It possesses high stiffness, dimensional stability and heat resistance combined with excellent processability including low warp and resistance to sink-mark formation. It maintains its inherent chemical resistance to greases, oils and hydrocarbons.

Applications

Ultramid B3WM8 BK00102 is generally recommended for applications such as marine hardware, brackets, fittings, bobbins, office furniture, appliance components, and power tool housings.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.49	
Moisture, %	D-570		
(24 Hour)		1.1	
(50% RH)		1.6	
(Saturation)		5.7	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Yield, MPa (psi)	D-638		
Tensile Strength, Break, MPa (psi)	D-638		
Elongation, Yield, %	D-638		
Elongation, Break, %	D-638		
Flexural Modulus, MPa (psi)	D-790		
Flexural Strength, MPa (psi)	D-790		
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
THERMAL	ASTM Test Method	Dry	Conditioned
Melting Point, °C(°F)	D-3418	220 (428)	-
Coef. of Linear Thermal Expansion, mm/mm °C (in/in °F)	E-831	X10-4	X10-4
ELECTRICAL	ASTM Test Method	Dry	Conditioned
Volume Resistivity, 1.5 mm	D-257	>1E13	-

Processing Guidelines
Material Handling

Max. Water content: 0.15%

Material is supplied in sealed containers and drying prior to molding in a dehumidifying or desiccant dryer is recommended. Drying parameters are dependent upon the actual percentage of moisture in the pellets and typical pre-drying conditions are 2-4 hours at 180F (83C). Recommended moisture levels for achieving optimum surface qualities and mechanical properties is 0.05% - 0.12%. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet (MSDS), or by contacting your BASF representative.

Typical Profile

Melt Temperature 270-295°C (518-563°F)

Mold Temperature 80-95°C (176-203°F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics are critical, a mold surface temperature of 80-95°C (176-203°F) is recommended.

Pressures

Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should be utilized to prevent glass breakage.

Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

Note

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